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APPLICANT : TDK CORP;

INVENTOR : NAKADA HIROYUKI;

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TITLE : ELECTRODE FOR ELECTROLYZING DILUTED AQUEOUS SODIUM CHLORIDE SOLUTION

ABSTRACT : PURPOSE: To improve the durability and current efficiency of the titled electrode having a coating layer of a catalyst contg. the oxides of Pt group metals on an electrically conductive substrate by using RuO_2 , IrO_2 , Pt and SnO_2 mixed in a specified ratio as the constituents of the coating layer.

CONSTITUTION: When a dil. aqueous NaCl soln. such as seawater is electrolyzed to manufacture hypochlorous acid for disinfection, bleaching or other use, an electrode having a coating layer of a catalyst is used. The electrode is obtd. by applying a mixture consisting of, by mole, 3~40% RuO_2 , 5~40% IrO_2 , 3~ 50% Pt and 10~50% SnO_2 to the cleaned surface of a substrate of an electrically conductive metal such as Ti, Zr or Nb and by carrying out baking. In the mixture, Sb may be substituted in the form of SbO_3 for $\leq 10\%$ of Sn in SnO_2 . The resulting electrode has superior durability and current efficiency when a dil. aqueous NaCl soln. is electrolyzed to manufacture hypochlorous acid.

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